steroid administration, Drotrecogin Alfa administration, and glycemic control goal. Outcome measures were; In-hospital mortality, ICU mortality, ICU LOS, hospital LOS and hospital discharge location. **RESULTS:** Of 58 patients, 24 (41%) met the criteria for severe sepsis with an average APACHE III score of 69 ± 31. There was a score of 60% on four (50%) of the eight process measures and <35% on the other four. In-hospital mortality of 25% (16.7% for ICU) compared favorably with 28.6% national. Average hospital LOS (9.1 ± 6.5 days) and ICU LOS (3.3 ± 3.4 days) were within expected benchmarks. Discharge to skilled nursing facility was 21%. Compared to those who did not meet severe sepsis criteria, the mortality rates were lower (25% vs. 29.1%) and the LOS values higher (9.1 vs. 8.4 days) in the severe sepsis group. The average direct cost of severe sepsis hospitalization was $30,061, mean daily cost of $3303. **CONCLUSIONS:** Variation in adoption of the SSC-IHI guideline is apparent. Though, severe sepsis outcomes are above average, opportunities for process improvement that should enhance outcomes in this setting exist.

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UTILIZATION ANALYSIS AND IMPACT OF ANTIBACTERIAL AGENTS IN TWO LEADING UNIVERSITY HOSPITALS IN NEIGHBORING COUNTRIES WITH DIFFERENT GDP AND HEALTH CARE SYSTEM

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OBJECTIVES: Antibacterial agents are still overused in many developing countries with the main consequence of constant increase in bacterial resistance. The purpose of this study is to compare the utilization of antibacterial agents and its economic impact on two leading University Hospitals in two neighboring countries, Croatia and Bosnia and Herzegovina, having similar historical values, but now having notable differences in health care system and GDP. Secondary objective was to assess the appropriateness of clinical guidelines and level of their implementation in each hospital. **METHODS:** Antibacterial utilization in 2007 was assessed for each hospital using the ABC calculator version 3.1. The results were compared at ATC levels 2–4. The following calculated parameters were used for the adjusted hospital to hospital comparison: number of utilized grams, number of utilized DDD's, number of grams utilized per 100 bed-days and finally the number of DDD's per 100 bed-days. Additional analysis of each hospital's treatment guidelines was performed for those ATC classes having actual treatment guidelines and results assessed in light of the level of implementation effectiveness and impact on the cost and bacterial resistance rate. **RESULTS:** Differences in antibacterial use between two leading University Hospitals in Croatia and Bosnia and Herzegovina were noted. Of all noted differences two classes of antibiotics were further analyzed because of their well known impact on bacterial resistance: third generation cephalosporins and quinolones. Subsequent analysis of the incidence of MRSA infections and Gram negative ESBL bacteria are conclusive and in line with the reported utilization findings. **CONCLUSIONS:** Although some treatment guidelines for antibacterial prophylaxis and treatment of bacterial infections were effectively implemented in both hospitals, there were still those which have to be developed and/or revised and subsequently implemented in order to ensure the most beneficial cost-effectiveness ratio and positive impact on bacterial resistance. Additional intra-hospital measures are to be developed and implemented in order to ensure the compliance with treatment guidelines, such as internal audits and issue-focused education of relevant health care professionals.

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PHARMACY-IMPLEMENTED GUIDELINES ON SWITCHING FROM INTRAVENOUS TO ORAL ANTIBIOTICS: A PROSPECTIVE STUDY IN A TEACHING HOSPITAL

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OBJECTIVES: Intravenous (IV) to oral (PO) switch therapy is a demonstrated method to achieve a more rational use of antibiotics. Several advantages have been associated with this strategy such as less preparation time, easier administration, greater comfort, lower risk of complications and lower antibiotic budget. The objective was to evaluate the impact of promoting an IV to PO switch of fluoroquinolones (FQ) with three different educational interventions. **METHODS:** A prospective observational study was conducted in 16 different wards of a teaching hospital of 959 beds. For all patients treated with a FQ, whatever the site of infection, data related to infection and therapy were collected during four different 3-month periods. The first period (A) was observational without intervention to identify the prescription habits. The second period (B) was a period of "passive" intervention with publication of IV/PO switch criteria in the hospital bulletin and personal letter to each physician. The third and fourth periods C and D were two crossover active interventions: intervention 1) IV/PO switch training sessions by clinical pharmacist to all physicians of the selected wards, and intervention 2) proactive interventions by clinical pharmacist. **RESULTS:** A total of 349 prescriptions were recorded. There was a significant reduction in number of overprescription days of IV treatment during period B compared to period A (4.6 ± 0.5 and 3.1 ± 0.4, $p = 0.027$) and period B compared to periods C + D (3.1 ± 0.4 and 1.5 ± 0.2, $p < 0.001$). Antibiotics budget and number of FQ vials were also reduced. There was no statistical difference between the two different active interventions ($p = 0.82$). **CONCLUSIONS:** Passive and active interventions to teach early switch from IV to PO FQ therapy are highly effective ($p < 0.05$). Active intervention by a clinical pharmacist whatever it is team-focused or case-focused is more efficient than passive.

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ADAPTATION & CALIBRATION OF A UK MODEL OF MENINGOCOCCAL DISEASE TO THE US SETTING

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OBJECTIVES: To evaluate vaccination policies for meningococcal disease in the US, we adapted and calibrated a dynamic model of meningococcal disease originally developed for the UK. **METHODS:** We adapted an age-stratified mathematical model of meningococcal transmission, carriage, and disease from the UK to the US setting. The model focus was expanded from serogroup C to serogroups A, C, W, and Y disease to reflect newer vaccines. The most recent available US cross-sectional carriage data were used to extract serogroups A, W, and Y carriage from the non-C ("other") serogroup data used in the UK model. We used recently-published contact matrix data for transmission calculations and performed formal calibrations to published US surveillance data. We first calibrated age-specific force of infection to ACWY carriage data and solved for transmission rates (β) at equilibrium for a cohort of 75,000 individuals representative of the US population. We then calibrated the risk of